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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,499	10/23/2000	Joshua Coates	SCAL.P0001	1575

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EXAMINER	
HWANG, JOON H	

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/695,499	COATES ET AL.	
	Examiner	Art Unit	
	Joon H. Hwang	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *63-84* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *63-84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/18/06, 11/20/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The applicants amended claims 63 and 83 in the amendment received on 9/18/06.

The pending claims are 63-84.

Response to Arguments

2. Applicant's arguments filed in the amendment received on 9/18/06 have been fully considered but they are not persuasive.

A. The applicants argue that *the office fails to identify a suggestion or motivation to combine reference teachings.*

The examiner respectfully traverses.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Inniss discloses a network between a client, a server, and any host resources (lines 25-35 in col. 4 and fig. 3). Inniss does not explicitly disclose a wide area public access network. However, Wilson discloses a network can be implemented using Internet, intranet, and/or any other network (lines 35-56 in col. 28). Wilson discloses the network is implemented

using Internet because Internet provides less expensive implementation of the network system (line 35 in col. 28 thru line 7 in col. 29). Therefore, based on Inniss in view of Wilson, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Wilson to the system of Inniss in order to provide less expensive implementation of the network system.

Furthermore, Inniss and Wilson disclose the claimed subject matter as discussed above except a digital fingerprint derived from contents of a file. However, Mattis teaches a digital fingerprint derived from contents of a file is utilized in a file request (lines 6-24 in col. 9) in order to easily locate the file. Therefore, based on Inniss in view of Wilson, and further in view of Mattis, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Mattis to the system of Inniss in order to easily locate a requested file.

"Reason, suggestion, or **motivation to combine two or more prior art references** in single invention **may come from references themselves**, from **knowledge of those skilled in art** that certain references or disclosures in references are known to be of interest in particular field, or from **nature of problem to be solved**;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181.

"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, **test is what combined**

teachings of references would have suggested to those of ordinary skill in art." In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

Thus, the applicants' arguments are not persuasive.

B. The applicants argue that *the reference when combined do not teach or suggest all the claim limitations.*

The examiner respectfully traverses.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Inniss discloses a virtual file system that mounts resources, such as files or directories, of distributed hosts (lines 25-41 and 62-67 in col. 3 and 1-11 in col. 4). The mounted resources in the virtual file system teaches the client receives a storage resource locator (SRL). When a client makes a request for a mounted resource in the virtual file system, the "single" server redirects the request, teaching the received SRL, to a resource server on behalf of a client (lines 25-36 in col. 4, lines 44-59 in col. 5, fig. 3, and fig. 7). Thus, the client transmits the request to a resource server via the single server. Since, the claim merely recites "transmits the received SRL to one of the storage centers" without specifying how transmitting is done (i.e., directly or indirectly), Inniss teaches the client transmits the received SRL to one of the storage centers.

Inniss discloses a request includes a server identification (i.e., address of a network, lines 50-51 in col. 6) and a file identification (lines 25-61 in col. 3, lines 25-46 in col. 4, line 65 in col. 4 thru line 20 in col. 5, and line 47 in col. 6 thru line 4 in col. 7).

It is a well settled rule that a reference must be considered not only for what it expressly teaches, but also for what it fairly suggests. See *In re Burckel,* 592 F.2d 1175, 201 USPQ 67 (CCPA 1979) and *In re Lamberti*, 545 F.2d 747, 192 USPQ 278 (CCPA 1976) as well as *In re Bode,* 550 F.2d 656, 193 USPQ (CCPA 1977) which indicates such fair suggestions to unpreferred embodiments must be considered even if they were not illustrated. Additionally, it is an equally well settled rule that what a reference can be said to fairly suggest relates to the concepts fairly contained therein, and is not limited by the specific structure chosen to illustrate such concepts. See *In re Bascom,* 230 F.2d 612, 109 USPQ 98 (CCPA 1956).

Furthermore, as discussed above in A (supra), Inniss in view of Wilson teach a public access network address of a server.

Therefore, the applicants' arguments are not persuasive.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 63-64, 71, 73-74, 81, and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson (U.S. Patent No. 6,718,347).

With respect to claim 63, Inniss teaches a virtual file system ("VFS") to store file system information for a single file system (i.e., a server A 24 in fig. 3, lines 14-40 in col. 1 and lines 25-61 in col. 3), wherein a client of the network storage system accesses the VFS over a network to manage a plurality of files of the single file system, and wherein the client receives a storage resource locator ("SRL") from the VFS to access the file in the single file system (lines 25-61 in col. 3, lines 25-46 in col. 4, line 65 in col. 4 thru line 20 in col. 5, and line 47 in col. 6 thru line 4 in col. 7); and a plurality of storage centers, located in disparate locations from each other and the client and coupled to the client through a network, each of the storage centers for storing a plurality of files for the single file system (i.e., a plurality of servers, such as server B and server C in fig. 2, lines 41-67 in col. 3, lines 1-11 and 25-46 in col. 4, and lines 21-43 in col. 5), wherein the client of the network storage system transmits the received SRL to one of the storage centers over the network (i.e., the client transmits the request to a resource server via the server A, lines 25-36 in col. 4, lines 44-59 in col. 5, fig. 3, and fig. 7), wherein the SRL includes an identification for a storage center to access one of the storage centers over the network and a unique identifier associated with the contents of the file to uniquely identify the file stored at one of the storage centers (lines 25-61 in col. 3, lines 25-46 in col. 4, line 65 in col. 4 thru line 20 in col. 5, and line 47 in col. 6 thru line 4 in col. 7). Inniss does not explicitly disclose a wide area public access network, the storage centers located in geographically disparate locations, and the client of the network storage system transmitting the received SRL to one of the storage centers over the wide area, public access network to download the file over the wide area,

public access network. However, Wilson teaches a wide area, public access network, a plurality of storage centers located in geographically disparate locations from each other and the client, a public access network address for a storage center, the client of the network storage system transmits the SRL to one of the storage centers over the wide area, public access network to download the file over the wide area, public access network (line 35 in col. 28 thru line 7 in col. 29, fig. 12, lines 19-25 in col. 1, line 61 in col. 1 thru line 13 in col. 2, lines 44-67 in col. 7, lines 17-33 in col. 8, lines 35-42 in col. 9, and lines 19-56 in col. 33) in order to provide less expensive implementation of the network system. Therefore, based on Inniss in view of Wilson, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Wilson to the system of Inniss in order to provide less expensive implementation of the network system.

With respect to claim 64, Inniss teaches a storage port for accessing at a client, the virtual file system and the storage centers, the storage port to translate a client file system request to a file system request including the file identifier to identify the file in the single file system (i.e., the network file system (NFS) 36 in fig. 3 translates a OS/2 request to a NFS request, lines 25-46 in col. 4, line 65 in col. 4 thru line 20 in col. 5, and lines 44-59 in col. 5).

With respect to claim 71, Inniss teaches a content delivery network coupled to the network storage system (lines 25-61 in col. 3, lines 25-46 in col. 4, line 65 in col. 4 thru line 20 in col. 5, and line 47 in col. 6 thru line 4 in col. 7).

The limitations of claims 73 and 83 are rejected in the analysis of claim 63 above, and these claims are rejected on that basis.

The limitations of claim 74 are rejected in the analysis of claim 64 above, and the claim is rejected on that basis.

The limitations of claim 81 are rejected in the analysis of claim 71 above, and the claim is rejected on that basis.

5. Claims 65 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson (U.S. Patent No. 6,718,347), and further in view of Nazari (U.S. Patent No. 6,405,201).

With respect to claim 65, Inniss and Wilson disclose the claimed subject matter as discussed above except an additional storage port. However, Nazari teaches at least one additional storage port for accessing a system and storages in the event of failover condition of the storage port (i.e., if a primary file system fails, a secondary file system takes its place, lines 37-44 in col. 4 and fig. 1) in order to provide a fault-tolerant file system. Therefore, based on Inniss in view of Wilson, and further in view of Nazari, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Nazari to the system of Inniss in order to provide a fault-tolerant file system.

The limitations of claim 75 are rejected in the analysis of claim 65 above, and the claim is rejected on that basis.

6. Claims 66-69 and 76-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson (U.S. Patent No. 6,718,347), and further in view of Popelka et al. (U.S. Patent No. 6,081,883).

With respect to claim 66, Inniss and Wilson disclose the claimed subject matter as discussed above except a plurality of distributed object storage managers and storage nodes in a storage center. However, Popelka teaches a storage center comprises: a plurality of distributed object storage managers ("DOSMs") for receiving requests to access the storage center (i.e., a plurality of network processors 110 in fig. 1 in a computer system, line 66 in col. 2 thru line 7 in col. 3 and lines 45-58 in col. 4); and a storage cluster, comprising a plurality of intelligent storage nodes, for storing files of the network storage system for serving access requests from the DOSMs, each intelligent node including a processor core and a plurality of storage devices (i.e., a FSP node 150 in fig. 1 includes a processor and storage devices, lines 42-54 in col. 2, lines 35-58 in col. 5, lines 20-39 in col. 6, lines 25-39 in col. 11, and fig. 4) in order to provide a scalable computer system. Therefore, based on Inniss in view of Wilson, and further in view of Popelka, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Popelka to the system of Inniss in order to provide a scalable computer system.

With respect to claim 67, Inniss does not explicitly disclose a multi-cast protocol. However, Wilson teaches a multi-cast feature wherein data can be transferred from a source to more than one destination (lines 19-34 in col. 33) so that in one case, data consistency can be maintained between the source and the destinations. Inniss and

Wilson do not explicitly disclose maintaining file information at the DOSMs regarding files stored in the intelligent storage node. However, Popelka teaches maintaining file information at the DOSMs regarding files stored in the intelligent storage node (i.e., read cache 111 in fig. 1). Therefore, the limitations of claim 67 are rejected in the analysis of claim 66 above, and the claim is rejected on that basis.

With respect to claim 68, Inniss and Wilson do not explicitly disclose the DOSMs comprising a data cache to cache file stored in the intelligent nodes. However, Popelka teaches a data cache for caching at least a subset of files stored in the intelligent node (i.e., read cache 111 in fig. 1). Therefore, the limitations of claim 68 are rejected in the analysis of claim 66 above, and the claim is rejected on that basis.

With respect to claim 69, Inniss does not explicitly disclose a load balancing fabric. However, Wilson teaches load balancers (lines 14-25 in col. 2, lines 43-56 in col. 9, lines 32-45 in col. 31, and fig. 3) in order to maximize system performance. Inniss and Wilson do not explicitly disclose caching data for files in high demand in the data caches of the DOSMs. However, Popelka teaches LRU maintenance for a cache teaching caching data for files in high demand (lines 14-16 in col. 12). Therefore, the limitations of claim 69 are rejected in the analysis of claim 68 above, and the claim is rejected on that basis.

With respect to claim 76, Popelka further teaches selecting one of a plurality of distributed object storage managers (DOSMs) to service the request (i.e., one of a plurality of network processors 110 is selected in fig. 1 in a computer system, line 66 in

col. 2 thru line 7 in col. 3 and lines 45-58 in col. 4). Therefore, the limitations of claim 76 are rejected in the analysis of claim 66 above, and the claim is rejected on that basis.

The limitations of claim 77 are rejected in the analysis of claim 67 above, and the claim is rejected on that basis.

The limitations of claim 78 are rejected in the analysis of claim 68 above, and the claim is rejected on that basis.

The limitations of claim 79 are rejected in the analysis of claim 69 above, and the claim is rejected on that basis.

7. Claims 70 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson (U.S. Patent No. 6,718,347), and further in view of Kern et al. (U.S. Patent No. 5,870,537).

With respect to claim 70, Inniss and Wilson disclose the claimed subject matter as discussed above except servicing access requests from a disparate storage center in the event that a failure occurs in another one of the storage centers. However, Kern teaches a dynamic failover mechanism for servicing access requests from a disparate storage center in the event that a failure occurs in another one of the storage centers (line 51 in col. 4 thru line 39 in col. 6, fig. 1, and fig. 2) in order to provide continuous data availability. Therefore, based on Inniss in view of Wilson, and further in view of Kern, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Kern to the system of Inniss in order to provide continuous data availability.

The limitations of claim 80 are rejected in the analysis of claim 70 above, and the claim is rejected on that basis.

8. Claims 72, 82, and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson (U.S. Patent No. 6,718,347), and further in view of Mattis et al. (U.S. Patent No. 6,128,627).

With respect to claim 72, Inniss and Wilson disclose the claimed subject matter as discussed above except a digital fingerprint derived from contents of a file. However, Mattis teaches a digital fingerprint derived from contents of a file is utilized in a file request (lines 6-24 in col. 9) in order to easily locate the file. Therefore, based on Inniss in view of Wilson, and further in view of Mattis, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Mattis to the system of Inniss in order to easily locate a requested file.

The limitations of claims 82 and 84 are rejected in the analysis of claim 72 above, and these claims are rejected on that basis.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joon Hwang
Patent Examiner
Technology Center 2100

12/7/06